

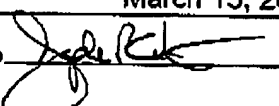
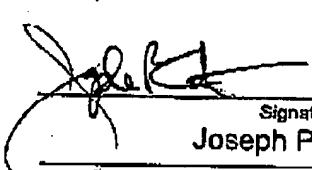
MAR 15 2006

Doc Code: AP.PRE.REQ

PTO/SB/33 (07-06)

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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional)	
		ARC920030058US1	
I hereby certify that is correspondence is being facsimile transmitted to 571-273-8300 [37 CFR 1.8(a)]		Application Number	Filed
on <u>March 15, 2006</u>		10/720,962	Nov. 24, 2003
Signature <u></u>		First Named Inventor	
Typed or printed name <u>Joseph P. Curtin, Reg. No. 34,571</u>		Stuart Stephen Papworth PARKIN	
		Art Unit	Examiner
		2815	J. Nguyen
Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.			
This request is being filed with a notice of appeal.			
The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.			
I am the			
<input type="checkbox"/>	applicant/inventor.		
<input type="checkbox"/>	assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)		
<input checked="" type="checkbox"/>	attorney or agent of record. Registration number <u>34,571</u>		
<input type="checkbox"/>	attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____		
		Signature <u></u>	
		Typed or printed name <u>Joseph P. Curtin</u>	
		Telephone number <u>503-296-8373</u>	
		Date <u>March 15, 2006</u>	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.			
<input type="checkbox"/>	*Total of _____ forms are submitted.		

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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of

Stuart Stephen Papworth PARKIN et al.)	
Serial No.: 10/720,962)	Art Unit: 2815
Filed: November 24, 2003)	Examiner: J.H. Nguyen
For: MAGNETIC TUNNEL)	Atty Dkt: ARC920030058US1
JUNCTIONS WITH IMPROVED)	
TUNNELING MAGNETO-)	
RESISTANCE)	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

MAIL STOP AF
Commissioner For Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

**THE EXAMINER HAS NOT SHOWN PROPER MOTIVATION
FOR COMBINING ODAGAWA AND A.R. FERCHMIN**

Applicants respectfully submit that the Examiner has not shown a proper motivation for combining U.S. Patent No. 6,436,526 to Odagawa et al. (Odagawa) and A.R. Ferchmin et al. (Ferchmin), disclosed on page 13, lines 3-7, of the instant patent application for the following reasons:

- (1) Claim 1 requires "a first layer formed from an amorphous material".
- (2) The Examiner asserts that film 210 disclosed by Odagawa corresponds to the "first layer" of claim 1. (See final Office Action dated 12/15/2005, page 2, lines 13-14.)

(3) The Examiner asserts that film 210 of Odagawa "is formed of CoFeB (col. 22, lines 25-26) but does not teach the atomic percent of B is added to CoFe to make this alloy amorphous." (See final Office Action dated 12/15/2005, page 2, line 23, through page 3, line 1.)

(4) The Examiner further asserts that "A.R. Ferchmin et al. teaches [sic] crystalline Co-Fe becomes amorphous when B is added to this alloy in the range of 10-25 percent (page 13, lines 3-7 of the instant application)." (See final Office Action dated 12/15/2005, page 3, lines 1-3.)

(5) The Examiner concludes that it would be obvious "to modify Odagawa et al. by adding B in the range of 10-25 atomic percent to Co-Fe to make this alloy amorphous" (See final Office Action dated 12/15/2006, page 3, lines 4-7.)

(6) Applicants respectfully submit that for the Examiner's conclusion to properly follow from the major and minor premises (i.e., paragraphs 3 and 4, respectively) proffered by the Examiner, either

(a) Odagawa film 210 must be crystalline Co-Fe so that one of ordinary skill in the art at the time the invention was made would be motivated to change the crystalline structure to an amorphous structure as disclosed by Ferchmin, or

(b) Odagawa film 210 must have magnetic and magneto-transport properties that one of ordinary skill in the art at the time the invention was made would have a motivation to modify in a manner disclosed by Ferchmin.

The Premise That Odagawa Film 210 Is Crystalline Is Without Basis

(7) Odagawa discloses nothing regarding the lattice structure, i.e., the crystalline structure, of film 210.

(8) Further, the Examiner has not demonstrated that film 210 is crystalline.

(9) Accordingly, if the major premise of the Examiner's syllogism is that Odagawa film 210 is crystalline Co-Fe, the major premise of the Examiner's syllogism is without basis.

(10) Consequently, Applicants respectfully submit that the Examiner's conclusion to the syllogism, that is, "to modify Odagawa et al. by adding B in the range of 10-25 atomic

percent to Co-Fe to make this alloy amorphous,” does not logically follow and, therefore, cannot be based on the major premise that Odagawa film 210 is crystalline Co-Fe. (See arguments in Response to Final Rejection dated 02/13/2006, page 10, line 17, through page 11, line 4.)

The Premise That Odagawa Film 210 Must Have Magnetic And Magneto-Transport Properties Is Without Basis

(11) Odagawa discloses film 210 is a non-magnetic film 210 formed of CoFeB. (See Odagawa, column 22, lines 20-21 and 24-25.)

(12) Ferchmin relates to increasing the TMR (Tunneling Magneto-Resistance) of a CoFeB alloy having magnetic and magneto-transport properties. (See instant patent application, page 13, paragraph 38.)

(13) Ferchmin discloses nothing regarding increasing the TMR of a non-magnetic CoFeB alloy.

(14) Accordingly, if the major premise of the Examiner's syllogism is that Odagawa film 210 has magnetic and magneto-transport properties, the major premise of the Examiner's syllogism is without basis.

(15) Consequently, Applicants respectfully submit that the Examiner's conclusion to the syllogism, that is, “to modify Odagawa et al. by adding B in the range of 10-25 atomic percent to Co-Fe to make this alloy amorphous,” does not logically follow and, therefore, cannot be based on the major premise that Odagawa film 210 must have magnetic and magneto-transport properties that one of ordinary skill in the art at the time the invention was made would have a motivation to modify in a manner disclosed by Ferchmin. (See arguments in Response to Final Rejection dated 02/13/2006, page 10, line 17, through page 11, line 4.)

The Examiner's Reply Argument In The Advisory Action Is Without Basis

(16) The Examiner responds to Applicants arguments by asserting that because “Odagawa et al. and Ferchmin et al. both disclose CoFB [sic] alloy and Ferchmin et al. teaches [sic] it is well known that crystalline CoFe alloy becomes amorphous when B is added to this

alloy in the range of 10-25 atomic percent.” (See Advisory Action dated 02/23/2006, page 3, lines 4-6.)

(17) Applicants respectfully submit that the Examiner has still not demonstrated that Odagawa film 210 is crystalline and, consequently, the Examiner’s proffered motivation for combining Odagawa and Ferchmin is still without basis.

(18) While the Examiner also asserts that “TMJ depends on the B and the Co-Fe composition of the alloy” (see Advisory Action dated 02/23/2006, page 3, line 6), the Examiner is ignoring that it is the amount of boron in Odagawa film 210 makes film 210 non-magnetic. In this regard, the Examiner has not explained why one of ordinary skill in the art at the time the invention was made would be motivated to modify the composition of non-magnetic film 210 to become a magnetic film 210 having magnetic and magneto-transport properties.

(19) Thus, the Examiner’s reply argument in the Advisory Action dated 02/23/2006 is without basis.

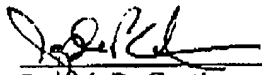
CONCLUSION

(20) Consequently, Applicants respectfully submit that the Examiner has not shown a proper motivation for combining Odagawa and A.R. Ferchmin.

It is requested that this application be passed to issue with claims 1-35.

Respectfully submitted,

Date: March 15, 2006



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